

Hit & Run CANDLESTICKS

TRADING FOR PROFIT

Rounded Bottom Breakout

Chart Pattern, Description & Scans



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Rounded Bottom Breakout



The Rounded Bottom Breakout (or RBB for short) is a very strong bullish reversal pattern that was discovered by Rick Saddler. RBBs are formed by many candles, over the course of weeks or months. The number of candles in the pattern will vary and can include many different shapes and color candles. Since it takes place over a long time, there are many elements of this pattern. However, once enough examples are studied, it becomes easy to identify.

The key elements or characteristics of this pattern include:

- Price falls down through the 50sma and then falls away from it in a strong, prolonged decline
- The 20sma confirms the decline by also falling through and away from the 50sma
- The decline stalls and consolidates, sometimes retesting the bottom (even repeatedly) to form a base
- The 20sma confirms by forming a rounded bottom shaped somewhat like a "guppy belly"
- Price converges back toward the 50sma
- The 20sma confirms by converging back toward the 50sma as well
- Ideally we would see a Bullish candlestick reversal signal
- Price then breaks up through the 50sma
- There is at least 10% of space left between price and the 200sma
- The 20sma confirms the breakout by also crossing back above the 50sma.

Again, while it sounds complex when written out, your eye will learn to easily pick up these elements at a glance with practice.

Pattern Psychology

Price begins to pull back and the decline gains more and more momentum. Traders are selling the stock hand over fist, until all of the weak hands are gone. This may end on a crescendo as the last of the longs decide they can't take the pain any more and bail out of their long positions in a panic.

At this point there is no large group of sellers left. So the decline stalls. However, after such a large decline, there are not a lot of buyers willing to step in just yet either. As a result price consolidates sideways, perhaps drifting higher on the lack of sellers and then re-testing the bottom on a lack of conviction by the new longs.

After trading in this bottoming pattern (creating a significant base), price slowly begins to gain momentum. This is because traders (new longs) are starting to gain confidence that the stock won't roll over and sell off strongly again and therefore they don't sell their position on the first small move down. This causes both price and the 20sma to begin rising, converging back toward the 50sma.

When price breaks back up through the 50sma, there is another whole group of traders that have been watching for that bullish indication. As they start piling back into the stock, the rally gains momentum and price quickly heads back toward the 200sma.

The Scans:

Two scans will be described here. Although similar, the two scans will likely be found useful by different groups of traders (depending on their individual risk/reward preferences). One interesting finding about scanning for RBBs is that although the 20sma is a key to confirming the pattern visually, it is actually the T-line (aka the 8ema, another of Rick Saddler's discoveries) that acts as a better scanning mechanism for finding the RBB pattern.

It should be noted that Rounded Bottom Breakouts are one of the harder patterns to scan for successfully. This is due to the potential variation in the length of decline, length of basing, depth of decline and momentum of breakout that a RBB can have. As a result, successful scans for this pattern will always find some errant results that will need to be manually weeded out. So bear that in mind. That said, the scans below do an excellent job of minimizing the number of bad results, while still finding many of the good ones.

The first of these is the "Aggressive RBB" scan. As the name implies, this scan is looking to find RBB setups with less confirmation in order to get in earlier (capture more of the potential upside of the rally move). The second is looking for the same pattern, but waits for more confirmation of the breakout (thus giving up a little of the upside potential in return for more certainty of breakout strength).

Aggressive Scan





Aggressive Scan Assumptions:

Since moving averages move slowly, we assume that the distance between the 50sma and 20sma decreasing over 10 days means that it has been decreasing significantly more than 10 days.

Since the 3ema is a fast moving average (but not as fast as price itself), we assume that the 3ema being below the 50sma for 10 days ending 4 days ago means that price itself did not make a big breakout and then collapse again. Price may have recently tested the 50sma, but we assume there was no big breakout and collapse in the immediate past.

We assume that we will add a liquidity filter to the scan (or scan against a stock universe that was pre-screened to have enough liquidity).

Scan Logic:

- The Close is below the 200sma.
- The Close is more than 10% below the 200sma.
- The 8ema has been below the 50sma for AT LEAST the 10 days ending yesterday.
- The distance between the 20sma and 50sma has decreased in the last 10 days.
- The 3ema (3T-line) was below the 50sma for the 10 days ending 4 days ago.
- Yesterday's Close was below the 50sma.
- Today's Close was above the 50sma.

Scan Result Review Criteria:

- We do not want to see a V-shaped bottom
- We are looking for a bottom that consolidated over a considerable period of time
- Ideally we are looking for a confirmed strong Bullish candlestick signal just prior to the breakout
- Ideally we are looking for the 20sma to be close to crossing back above the 50sma
- Ideally we are looking for strong move on the breakout (large candle, gap up, etc.)

RBB Aggressive - TC2000 Code:

$C < \text{AVGC200}$ AND
 $(\text{AVGC200} - C) / C > .10$ AND

($\text{XAVGC8.10} < \text{AVGC50.10}$ AND
 $\text{XAVGC8.9} < \text{AVGC50.9}$ AND
 $\text{XAVGC8.8} < \text{AVGC50.8}$ AND
 $\text{XAVGC8.7} < \text{AVGC50.7}$ AND
 $\text{XAVGC8.6} < \text{AVGC50.6}$ AND
 $\text{XAVGC8.5} < \text{AVGC50.5}$ AND
 $\text{XAVGC8.4} < \text{AVGC50.4}$ AND
 $\text{XAVGC8.3} < \text{AVGC50.3}$ AND
 $\text{XAVGC8.2} < \text{AVGC50.2}$ AND
 $\text{XAVGC8.1} < \text{AVGC50.1}$) AND

$\text{AVGC20.15} < \text{AVGC50.15}$ AND
 $(\text{AVGC50.1} - \text{AVGC20.1}) < (\text{AVGC50.15} - \text{AVGC20.15})$ AND

($\text{XAVGC3.3} < \text{AVGC50.3}$ AND
 $\text{XAVGC3.4} < \text{AVGC50.4}$ AND
 $\text{XAVGC3.5} < \text{AVGC50.5}$ AND
 $\text{XAVGC3.6} < \text{AVGC50.6}$ AND
 $\text{XAVGC3.7} < \text{AVGC50.7}$ AND
 $\text{XAVGC3.8} < \text{AVGC50.8}$ AND
 $\text{XAVGC3.9} < \text{AVGC50.9}$ AND
 $\text{XAVGC3.10} < \text{AVGC50.10}$ AND
 $\text{XAVGC3.11} < \text{AVGC50.11}$ AND
 $\text{XAVGC3.12} < \text{AVGC50.12}$) AND

$C1 \leq \text{AVGC50.1}$ AND
 $C > \text{AVGC50}$

RBB Aggressive - TOS Code:

```
#Rounded Bottom Breakout - Aggressive
#Written by Ed Carter
def C = close; def C1 = close[1];
def AVGC200 = SimpleMovingAvg(close, 200);
def AVGC50 = SimpleMovingAvg(close, 50);
def AVGC20 = SimpleMovingAvg(close, 20);
def XAVGC8 = ExpAverage(close, 8);
def XAVGC3 = ExpAverage(close, 3);

plot RBBAggr = (
  C < AVGC200 AND
  (AVGC200 - C) / C > .10 AND

  ( XAVGC8[10] < AVGC50[10] AND
  XAVGC8[9] < AVGC50[9] AND
  XAVGC8[8] < AVGC50[8] AND
  XAVGC8[7] < AVGC50[7] AND
  XAVGC8[6] < AVGC50[6] AND
  XAVGC8[5] < AVGC50[5] AND
  XAVGC8[4] < AVGC50[4] AND
  XAVGC8[3] < AVGC50[3] AND
  XAVGC8[2] < AVGC50[2] AND
  XAVGC8[1] < AVGC50[1] ) AND

  AVGC20[15] < AVGC50[15] AND
  (AVGC50[1] - AVGC20[1]) < (AVGC50[15] - AVGC20[15]) AND

  ( XAVGC3[3] < AVGC50[3] AND
  XAVGC3[4] < AVGC50[4] AND
  XAVGC3[5] < AVGC50[5] AND
  XAVGC3[6] < AVGC50[6] AND
  XAVGC3[7] < AVGC50[7] AND
  XAVGC3[8] < AVGC50[8] AND
  XAVGC3[9] < AVGC50[9] AND
  XAVGC3[10] < AVGC50[10] AND
  XAVGC3[11] < AVGC50[11] AND
  XAVGC3[12] < AVGC50[12]) AND

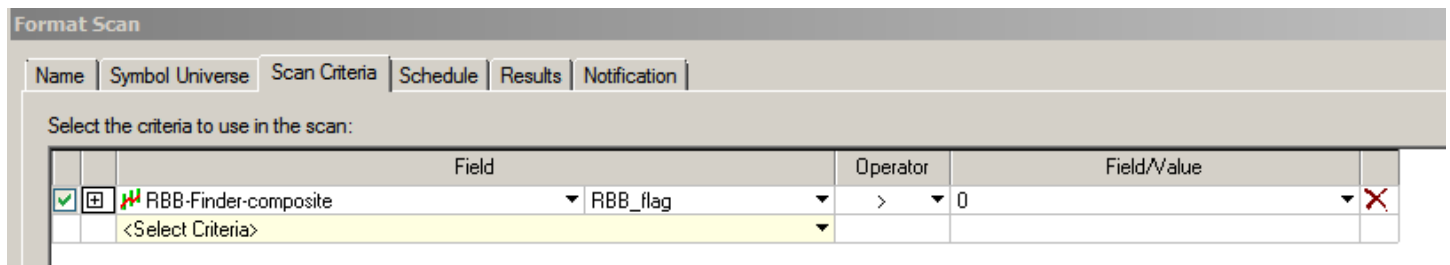
  C1 <= AVGC50[1] AND
  C > AVGC50
);
```

RBB Aggressive - Tradestation Code:

The code for Tradestation (created by Jim Cooper, w2jc, based on Ed Carter's Telechart PCF code) has been written to combine both the Aggressive and Conservative options into one indicator.

When either type of RBB is detected on the current bar of the chart, an optional text and/or audible alert is given which specifies the type of RBB detected. (The "alert once per bar" option must be enabled in the Format / Alerts tab). (A more detailed alert message plus other features is available from <http://TSIndicators.info>)

Advanced Tradestation users can use this indicator in the TS scanner by scanning for **RBB_flag > 0** which will find both Aggressive (1) and Conservative (2) matches. If only one type of RBB is desired, the scan can be set for RBB_flag = 1 for Aggressive only, or RBB_flag = 2 for Conservative only.



```
// RBB-Finder-composite (code by Jim Cooper, w2jc, based on original PCF by Ed Carter)
```

```
inputs:
```

```
    versionID      ("v01e"),
    Aggressive_color (yellow),
    Conservative_color (cyan),
    Use_VolxPrice   ("yes" {yes/no})
;
```

```
// end of INPUTS section
```

```
variables: // for moving averages
```

```
    XAVGC3      ( 0 ),
    XAVGC8      ( 0 ),
    AVGC20      ( 0 ),
    AVGC50      ( 0 ),
    AVGC200     ( 0 ),
    AVGV63      ( 0 ),
    MINV10      ( 0 ),
    RBB_aggr     ( 0 ),      { flag for when aggressive conditions are met }
    RBB_cnsrv    ( 0 ),      { flag for when conservative conditions are met }
    RBB_flag     ( 0 )      { flag for final conditions }
;
```

```
variables:
```

```
    chk_200ma_tgt ( 0 ),
    price_vol_chk ( 0 ),
    chk_3ma_50ma  ( 0 ),
    aggr_chk      ( 0 ),
    aggr_20ma_chk ( 0 ),
    aggr_50ma_chk ( 0 ),
    cnsrv_chk     ( 0 ),
    cnsrv_20ma_chk ( 0 ),
    cnsrv_50ma_chk ( 0 )
;
```

```
// begin standard - common routines =====
```

```
{ ===== calculate moving average ===== }
```

```
    XAVGC3      = XAverage ( Close, 3 );
    XAVGC8      = XAverage ( Close, 8 );
    AVGC20      = AverageFC ( Close, 20 );
    AVGC50      = AverageFC ( Close, 50 );
    AVGC200     = AverageFC ( Close, 200 );

    AVGV63      = AverageFC ( Volume, 63 );
    MINV10      = Lowest     ( Volume, 10 );
```



```
RBB_aggr    = 0;
RBB_cnsrv   = 0;
RBB_flag    = 0;
```

```
if {if2} Use_VolxPrice = "yes"
  and AVGV63 * Close >= 1000000
  and MINV10 * Close >= 1000000
  then price_vol_chk = 1
  else price_vol_chk = 0 ;
```

```
if {if3} Close < AVGC200
  and (AVGC200 - Close) / Close > 0.10
  then chk_200ma_tgt = 1
  else chk_200ma_tgt = 0 ;
```

```
if {if4} (
  XAVGC8[10] < AVGC50[10] AND
  XAVGC8[ 9] < AVGC50[ 9] AND
  XAVGC8[ 8] < AVGC50[ 8] AND
  XAVGC8[ 7] < AVGC50[ 7] AND
  XAVGC8[ 6] < AVGC50[ 6] AND
  XAVGC8[ 5] < AVGC50[ 5] AND
  XAVGC8[ 4] < AVGC50[ 4] AND
  XAVGC8[ 3] < AVGC50[ 3] AND
  XAVGC8[ 2] < AVGC50[ 2] AND
  XAVGC8[ 1] < AVGC50[ 1]
)
  then aggr_chk = 1
  else aggr_chk = 0 ;
```

```
if {if5} (
  XAVGC3[ 3] < AVGC50[ 3] AND
  XAVGC3[ 4] < AVGC50[ 4] AND
  XAVGC3[ 5] < AVGC50[ 5] AND
  XAVGC3[ 6] < AVGC50[ 6] AND
  XAVGC3[ 7] < AVGC50[ 7] AND
  XAVGC3[ 8] < AVGC50[ 8] AND
  XAVGC3[ 9] < AVGC50[ 9] AND
  XAVGC3[10] < AVGC50[10] AND
  XAVGC3[11] < AVGC50[11] AND
  XAVGC3[12] < AVGC50[12]
)
  then chk_3ma_50ma = 1
  else chk_3ma_50ma = 0 ;
```

```

if {if9} (
    XAVGC8[15] < AVGC50[15] AND
    XAVGC8[14] < AVGC50[14] AND
    XAVGC8[13] < AVGC50[13] AND
    XAVGC8[12] < AVGC50[12] AND
    XAVGC8[11] < AVGC50[11] AND
    XAVGC8[10] < AVGC50[10] AND
    XAVGC8[9 ] < AVGC50[9] AND
    XAVGC8[8 ] < AVGC50[8] AND
    XAVGC8[7 ] < AVGC50[7] AND
    XAVGC8[6 ] < AVGC50[6]
)
OR

( XAVGC8[14] < AVGC50[14] AND
    XAVGC8[13] < AVGC50[13] AND
    XAVGC8[12] < AVGC50[12] AND
    XAVGC8[11] < AVGC50[11] AND
    XAVGC8[10] < AVGC50[10] AND
    XAVGC8[9 ] < AVGC50[9] AND
    XAVGC8[8 ] < AVGC50[8] AND
    XAVGC8[7 ] < AVGC50[7] AND
    XAVGC8[6 ] < AVGC50[6] AND
    XAVGC8[5 ] < AVGC50[5]
)
OR

( XAVGC8[13] < AVGC50[13] AND
    XAVGC8[12] < AVGC50[12] AND
    XAVGC8[11] < AVGC50[11] AND
    XAVGC8[10] < AVGC50[10] AND
    XAVGC8[9 ] < AVGC50[9] AND
    XAVGC8[8 ] < AVGC50[8] AND
    XAVGC8[7 ] < AVGC50[7] AND
    XAVGC8[6 ] < AVGC50[6] AND
    XAVGC8[5 ] < AVGC50[5] AND
    XAVGC8[4 ] < AVGC50[4]
)
OR

( XAVGC8[12] < AVGC50[12] AND
    XAVGC8[11] < AVGC50[11] AND
    XAVGC8[10] < AVGC50[10] AND
    XAVGC8[9 ] < AVGC50[9] AND
    XAVGC8[8 ] < AVGC50[8] AND
    XAVGC8[7 ] < AVGC50[7] AND
    XAVGC8[6 ] < AVGC50[6] AND
    XAVGC8[5 ] < AVGC50[5] AND
    XAVGC8[4 ] < AVGC50[4] AND
    XAVGC8[3 ] < AVGC50[3]
)
OR

```

```

( XAVGC8[11] < AVGC50[11] AND
  XAVGC8[10] < AVGC50[10] AND
  XAVGC8[9 ] < AVGC50[9] AND
  XAVGC8[8 ] < AVGC50[8] AND
  XAVGC8[7 ] < AVGC50[7] AND
  XAVGC8[6 ] < AVGC50[6] AND
  XAVGC8[5 ] < AVGC50[5] AND
  XAVGC8[4 ] < AVGC50[4] AND
  XAVGC8[3 ] < AVGC50[3] AND
  XAVGC8[2 ] < AVGC50[2]
)
OR

```

```

( XAVGC8[10] < AVGC50[10] AND
  XAVGC8[9 ] < AVGC50[9] AND
  XAVGC8[8 ] < AVGC50[8] AND
  XAVGC8[7 ] < AVGC50[7] AND
  XAVGC8[6 ] < AVGC50[6] AND
  XAVGC8[5 ] < AVGC50[5] AND
  XAVGC8[4 ] < AVGC50[4] AND
  XAVGC8[3 ] < AVGC50[3] AND
  XAVGC8[2 ] < AVGC50[2] AND
  XAVGC8[1 ] < AVGC50[1]
)

```

```

then cnsrv_chk = 1
else cnsrv_chk = 0 ;

```

```

if {if12} AVGC20[15] < AVGC50[15]
  and (AVGC50[1] - AVGC20[1]) < (AVGC50[15] - AVGC20[15])
  then aggr_20ma_chk = 1
  else aggr_20ma_chk = 0 ;

```

```

if {if13} AVGC20[15] < AVGC50[15]
  and (AVGC50[3] - AVGC20[3]) < (AVGC50[15] - AVGC20[15])
  then cnsrv_20ma_chk = 1
  else cnsrv_20ma_chk = 0 ;

```

```

if {if6} Close[1] <= AVGC50[1]
  and Close > AVGC50
  then aggr_50ma_chk = 1
  else aggr_50ma_chk = 0 ;

```

```

if {if7} XAVGC3 > AVGC50
  and Close[1] > AVGC50[1]
  and Close > AVGC50
  then cnsrv_50ma_chk = 1
  else cnsrv_50ma_chk = 0 ;

```

```

if {if8}(Use_VolxPrice <> "yes" or price_vol_chk = 1 )
    and chk_200ma_tgt = 1
    and aggr_chk = 1
    and chk_3ma_50ma = 1
    and aggr_20ma_chk = 1
    and aggr_50ma_chk = 1
    then
        RBB_aggr = 1
    else
        RBB_aggr = 0
    ;

if {if10} (Use_VolxPrice <> "yes" or price_vol_chk = 1 )
    and chk_200ma_tgt = 1
    and cnsrv_chk = 1
    and chk_3ma_50ma = 1
    and cnsrv_20ma_chk = 1
    and cnsrv_50ma_chk = 1
    then
        RBB_cnsrv = 2
    else
        RBB_cnsrv = 0
    ;

RBB_flag = RBB_aggr + RBB_cnsrv ;

if RBB_flag > 0 then
    plot11 (RBB_flag, "RBB_flag");

if RBB_flag = 1 then setplotcolor (11, Aggressive_color );
if RBB_flag = 2 then setplotcolor (11, Conservative_color );

    if{if3} RBB_flag = 1 then Alert ( " Aggressive Rounded Bottom Breakout detected " );

    if{if11} RBB_flag = 2 then Alert ( " Conservative Rounded Bottom Breakout detected " );

// end of all code.

{
Note: an easily importable .ELD Tradestation file with the above code PLUS greatly enhanced
and informative alert messages and setup files for use as a scan can be purchased from Jim Cooper
by emailing RBB@JimCooper.org
}

```

Conservative Scan



Conservative Scan Assumptions:

Since moving averages move slowly, we assume that the distance between the 50sma and 20sma decreasing over 10 days means that it has been decreasing significantly more than 10 days.

Since the 3ema is a fast moving average (but not as fast as price itself), we assume that the 3ema being below the 50sma for 10 days ending 4 days ago means that price itself did not make a big breakout and then collapse again. Price may have recently tested the 50sma, but we assume there was no big breakout and then collapse.

We assume that we will add a liquidity filter to the scan (or scan against a stock universe that was pre-screened to have enough liquidity).

Scan Logic:

- a) The Close is below the 200sma.
- b) The Close is more than 10% below the 200sma.
- c) The 8ema (T-line) was below the 50sma AT LEAST 10 consecutive of the 15 days ending yesterday.
- d) The distance between the 20sma and 50sma has decreased in the last 15 days.
- e) The 3ema (3T-line) was below the 50sma for the 10 days ending 4 days ago.
- f) The 3ema (3T-line) is above the 50sma today.
- g) Yesterday's Close was above the 50sma.
- h) Today's Close is above the 50sma.

Scan Result Review Criteria:

- We do not want to see a V-shaped bottom
- We are looking for a bottom that consolidated over a considerable period of time
- Ideally we are looking for a confirmed strong Bullish candlestick signal just prior to the breakout
- Ideally we are looking for the 20sma to be close to crossing back above the 50sma
- Ideally we are looking for strong move on the breakout (large candle, gap up, etc.)

RBB Conservative - TC2000 Code:

C < AVGC200 AND
(AVGC200 - C) / C > .10 AND

(XAVGC8.15 < AVGC50.15 AND
XAVGC8.14 < AVGC50.14 AND
XAVGC8.13 < AVGC50.13 AND
XAVGC8.12 < AVGC50.12 AND
XAVGC8.11 < AVGC50.11 AND
XAVGC8.10 < AVGC50.10 AND
XAVGC8.9 < AVGC50.9 AND
XAVGC8.8 < AVGC50.8 AND
XAVGC8.7 < AVGC50.7 AND
XAVGC8.6 < AVGC50.6) OR

(XAVGC8.14 < AVGC50.14 AND
XAVGC8.13 < AVGC50.13 AND
XAVGC8.12 < AVGC50.12 AND
XAVGC8.11 < AVGC50.11 AND
XAVGC8.10 < AVGC50.10 AND
XAVGC8.9 < AVGC50.9 AND
XAVGC8.8 < AVGC50.8 AND
XAVGC8.7 < AVGC50.7 AND
XAVGC8.6 < AVGC50.6 AND
XAVGC8.5 < AVGC50.5) OR

(XAVGC8.13 < AVGC50.13 AND
XAVGC8.12 < AVGC50.12 AND
XAVGC8.11 < AVGC50.11 AND
XAVGC8.10 < AVGC50.10 AND
XAVGC8.9 < AVGC50.9 AND
XAVGC8.8 < AVGC50.8 AND
XAVGC8.7 < AVGC50.7 AND
XAVGC8.6 < AVGC50.6 AND
XAVGC8.5 < AVGC50.5 AND
XAVGC8.4 < AVGC50.4) OR

(XAVGC8.12 < AVGC50.12 AND
XAVGC8.11 < AVGC50.11 AND
XAVGC8.10 < AVGC50.10 AND
XAVGC8.9 < AVGC50.9 AND
XAVGC8.8 < AVGC50.8 AND
XAVGC8.7 < AVGC50.7 AND
XAVGC8.6 < AVGC50.6 AND
XAVGC8.5 < AVGC50.5 AND
XAVGC8.4 < AVGC50.4 AND
XAVGC8.3 < AVGC50.3) OR

(XAVGC8.11 < AVGC50.11 AND
XAVGC8.10 < AVGC50.10 AND
XAVGC8.9 < AVGC50.9 AND

XAVGC8.8 < AVGC50.8 AND
XAVGC8.7 < AVGC50.7 AND
XAVGC8.6 < AVGC50.6 AND
XAVGC8.5 < AVGC50.5 AND
XAVGC8.4 < AVGC50.4 AND
XAVGC8.3 < AVGC50.3 AND
XAVGC8.2 < AVGC50.2) OR

(XAVGC8.10 < AVGC50.10 AND
XAVGC8.9 < AVGC50.9 AND
XAVGC8.8 < AVGC50.8 AND
XAVGC8.7 < AVGC50.7 AND
XAVGC8.6 < AVGC50.6 AND
XAVGC8.5 < AVGC50.5 AND
XAVGC8.4 < AVGC50.4 AND
XAVGC8.3 < AVGC50.3 AND
XAVGC8.2 < AVGC50.2 AND
XAVGC8.1 < AVGC50.1) AND

(XAVGC3.3 < AVGC50.3 AND
XAVGC3.4 < AVGC50.4 AND
XAVGC3.5 < AVGC50.5 AND
XAVGC3.6 < AVGC50.6 AND
XAVGC3.7 < AVGC50.7 AND
XAVGC3.8 < AVGC50.8 AND
XAVGC3.9 < AVGC50.9 AND
XAVGC3.10 < AVGC50.10 AND
XAVGC3.11 < AVGC50.11 AND
XAVGC3.12 < AVGC50.12) AND

AVGC20.15 < AVGC50.15 AND
(AVGC50.3 - AVGC20.3) < (AVGC50.15 - AVGC20.15) AND

XAVGC3 > AVGC50 AND
C1 > AVGC50.1 AND
C > AVGC50

RBB Conservative - TOS Code:

TOS's Thinkscript engine has limitations that prevent it from running the Conservative Scan. When run in TOS, the Conservative scan returns the following error:

*com.devexperts.tos.thinkscript.runtime.ScriptAndData\$TooComplexException:
The complexity of the expression suggests that it may not be reliable with real-time data.*

Since the same scan logic runs just fine in both TC2000 and TOS...and the TOS Thinkscript code below is syntactically correct...it will unfortunately be up to a TOS user Trader to take this issue to TOS Technical Support (or the Thinkscript Power Users Group) in hope of finding a resolution that does not lose any of the logic.

I'm sorry that I could not provide a better solution. However, that's the best I can do at this point.

```
#Rounded Bottom Breakout - Conservative
#Written by Ed Carter
def C = close; def C1 = close[1];
def AVGC200 = SimpleMovingAvg(close, 200);
def AVGC50 = SimpleMovingAvg(close, 50);
def AVGC20 = SimpleMovingAvg(close, 20);
def XAVGC8 = ExpAverage(close, 8);
def XAVGC3 = ExpAverage(close, 3);
```

```
plot RBBCons = (
  C < AVGC200 AND
  (AVGC200 - C) / C > .10 AND

  ( XAVGC8[15] < AVGC50[15] AND
  XAVGC8[14] < AVGC50[14] AND
  XAVGC8[13] < AVGC50[13] AND
  XAVGC8[12] < AVGC50[12] AND
  XAVGC8[11] < AVGC50[11] AND
  XAVGC8[10] < AVGC50[10] AND
  XAVGC8[9] < AVGC50[9] AND
  XAVGC8[8] < AVGC50[8] AND
  XAVGC8[7] < AVGC50[7] AND
  XAVGC8[6] < AVGC50[6] ) OR

  ( XAVGC8[14] < AVGC50[14] AND
  XAVGC8[13] < AVGC50[13] AND
  XAVGC8[12] < AVGC50[12] AND
  XAVGC8[11] < AVGC50[11] AND
  XAVGC8[10] < AVGC50[10] AND
  XAVGC8[9] < AVGC50[9] AND
  XAVGC8[8] < AVGC50[8] AND
  XAVGC8[7] < AVGC50[7] AND
  XAVGC8[6] < AVGC50[6] AND
  XAVGC8[5] < AVGC50[5] ) OR
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(XAVGC8[13] < AVGC50[13] AND
XAVGC8[12] < AVGC50[12] AND
XAVGC8[11] < AVGC50[11] AND
XAVGC8[10] < AVGC50[10] AND
XAVGC8[9] < AVGC50[9] AND
XAVGC8[8] < AVGC50[8] AND
XAVGC8[7] < AVGC50[7] AND
XAVGC8[6] < AVGC50[6] AND
XAVGC8[5] < AVGC50[5] AND
XAVGC8[4] < AVGC50[4]) OR

(XAVGC8[12] < AVGC50[12] AND
XAVGC8[11] < AVGC50[11] AND
XAVGC8[10] < AVGC50[10] AND
XAVGC8[9] < AVGC50[9] AND
XAVGC8[8] < AVGC50[8] AND
XAVGC8[7] < AVGC50[7] AND
XAVGC8[6] < AVGC50[6] AND
XAVGC8[5] < AVGC50[5] AND
XAVGC8[4] < AVGC50[4] AND
XAVGC8[3] < AVGC50[3]) OR

(XAVGC8[11] < AVGC50[11] AND
XAVGC8[10] < AVGC50[10] AND
XAVGC8[9] < AVGC50[9] AND
XAVGC8[8] < AVGC50[8] AND
XAVGC8[7] < AVGC50[7] AND
XAVGC8[6] < AVGC50[6] AND
XAVGC8[5] < AVGC50[5] AND
XAVGC8[4] < AVGC50[4] AND
XAVGC8[3] < AVGC50[3] AND
XAVGC8[2] < AVGC50[2]) OR

(XAVGC8[10] < AVGC50[10] AND
XAVGC8[9] < AVGC50[9] AND
XAVGC8[8] < AVGC50[8] AND
XAVGC8[7] < AVGC50[7] AND
XAVGC8[6] < AVGC50[6] AND
XAVGC8[5] < AVGC50[5] AND
XAVGC8[4] < AVGC50[4] AND
XAVGC8[3] < AVGC50[3] AND
XAVGC8[2] < AVGC50[2] AND
XAVGC8[1] < AVGC50[1]) AND

AVGC20[15] < AVGC50[15] AND
(AVGC50[3] - AVGC20[3]) < (AVGC50[15] - AVGC20[15]) AND

(XAVGC3[3] < AVGC50[3] AND
XAVGC3[4] < AVGC50[4] AND
XAVGC3[5] < AVGC50[5] AND

XAVGC3[6] < AVGC50[6] AND
XAVGC3[7] < AVGC50[7] AND
XAVGC3[8] < AVGC50[8] AND
XAVGC3[9] < AVGC50[9] AND
XAVGC3[10] < AVGC50[10] AND
XAVGC3[11] < AVGC50[11] AND
XAVGC3[12] < AVGC50[12]) AND

XAVGC3 > AVGC50 AND

C1 > AVGC50[1] AND

C > AVGC50

);

RBB Conservative - Tradestation Code:

See the previous section on Rounded Bottom Breakout - Aggressive on page 7.